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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,043	09/23/2003	Arcady Reiderman	EMS-03-02	3993
34010	7590	05/03/2007		
RICHARD A. FAGIN			EXAMINER	
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			ART UNIT	PAPER NUMBER
			3768	
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			05/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/669,043	Applicant(s) REIDERMAN ET AL.	
	Examiner Jacqueline Cheng	Art Unit 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-16, 18-20, 22-29 and 31-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-16, 18-20, 22-29 and 31-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claim 1-37 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. **Claim 1, 3-11, 13, 14, 16, 19, 20, 23, 24, 26-29, 32-35, and 37-39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lew (US 5,194,809). Lew discloses a nuclear magnetic resonance device and method which provides spectroscopic information on the constituents of a part of the living body. In this method a specific localized part of a living body undergoes excitation from the NMR device, so although Lew does not explicitly disclose first imaging a body and then determining a size and position of the region of interest, it would be obvious to one skilled in the art to do so to be able to know and to determine where the region of interest is. It is also obvious to one skilled in the art to not sedate or restrict movement of a patient while imaging as this is well known in the art of MRI. Once this area of interest has been determined a nonalternating magnetic field (static magnetic field) with a gradient in a direction perpendicular (transverse) to the nonalternating magnetic field is applied. An alternating RF current (by varying the amplitude) is then applied, exciting a NMR phenomena, which are then collected and analyzed, the absolute abundance (mass) of the constituent molecular species being determined. This absolute abundance of the molecular species is displayed as a curve showing the mass

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distribution (col. 1 line 28-31, col. 1 line 48-col. 2 line 42, col. 3 line 45-col. 4 line 3, col. 5 line 14-19, col. 11 line 19-55, col. 12 line 31-34).

3. **Claims 2, 15, 22, 31, and 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lew further in view of Van Ypren (US Patent No. 5,402,787). Lew does not explicitly disclose a type of sequence to perform, but does disclose that other modifications and operating conditions can be applied, so it would be obvious to one skilled in the art at the time of the invention to apply a well-chosen sequence of RF-pulses and gradient field pulses, such as a Carr-Purcell-Meiboom-Gill sequence as described in Van Ypren (col. 1 line 20-22).

4. **Claims 18 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lew further in view of US Patent No. 4,784,146 (herein referred to as Mancuso et al.). Mancuso et al. discloses calculating signal to noise ratio with respect to a volume of the axial segment (col. 1 line 65-67). It would be obvious to one with ordinary skill in the art at the time of the invention to combine Mancuso et al. and Lew as both inventions related to MRI imaging and to further the utility of Lew to have a well tuned receiver coil which is a important performance criterion.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacqueline Cheng whose telephone number is 571-272-5596. The examiner can normally be reached on M-F 10:00-6:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni Mantis-Mercader can be reached on 571-272-4740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JC


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SUPERVISORY PATENT EXAMINER
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